Application No. 09/775,367

REMARKS

Subsequent to the receipt of the office action mailed November 16, 2004 and prior to the mailing of this response, Applicant submitted two Supplemental Information Disclosure Statements. The first Supplemental IDS, based on a EPO search report for the European counterpart to the present application, was mailed January 28, 2005. The second Supplemental IDS, based on a EPO search report for the European counterpart of a related US patent (US 6,741,741 B2) was mailed February 8, 2005. The related patent, US 6,741,741 B2, was filed on the same date by the same inventor as the present application.

In the office action mailed November 16, 2004, the Examiner rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication US 2003/0152272 A1 to Venable ("Venable"). The Examiner further indicated that claim 7 was allowable and that claims 2 - 6 and 8 - 10 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

By this response claim 8 has been cancelled; claims 7, 9 and 10 have been amended; and claims 11 - 13 have been added. The newly added claims 11 - 13 are similar to existing claims identified as being allowable and, thus, are believed to be allowable over the art of record.

Claims 7, 9 and 10 have been amended to correct minor typographical errors therein. In addition, claim 9 has been amended to depend from claim 7. As originally filed, claim 9 incorrectly claimed dependency from claim 1 rather than claim 7. A reading of claim 9 shows that claim 9 correctly depended from claim 7 rather than claim 1. In particular, claim 9 adds the further step of calculating a set of second values from the image data using a second function. A reading of claim 1 shows that claim 1 included steps for

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calculating a set of first values from the image data using a first function and for calculating a set of second values from the image data using a second function. Claim 7, on the other hand, only included the step of calculating a set of first values from the image data using a first function and did not include any step related to calculating a set of second values from the image data using a second function.

As stated above, claim 1 has been rejected under 35 U.S.C. §102(e) as being anticipated by Venable. In particular, the Examiner stated that Venable discloses a method for automatically detecting an edge of a document (page 1, paragraph 0002 lines 1-5) comprising the steps of: calculating a set of first values from the image data (using equations shown at p.5, para. 0076 lines 14-19, set of first value is calculated; the function shown in paragraph 0076 of lines 15 is used as first order function when the slope is more vertical); calculating a set of second values from the image data using a second function, (a function shown in para. 0076 of lines 18, used to calculate a set of second value; also used a as a second order function); determining a first slope value, (the first slope value is determined by equation shown in paragraph 0076 lines 19); determining a second slope value, the second slope value being a function of the difference between a plurality of second values (a function shown in paragraph 0076 of lines 18, used to calculate a set of second value); and determining a detected edge of the document from the first slope value and the second slope value, see (col.5, paragraph 0076, lines 15-19, where the slope angle is calculated using the equation). This rejection is respectfully traversed.

Applicant respectfully submits that the Examiner has failed to set out a prima facie case of anticipation as Venable fails to teach or suggest each of the elements of Applicant's claim 1. A close reading of Venable reveals that the paragraph and equations therein cited by the Examiner in support of the

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rejection do not operate to determine a detected edge of a document from the first slope value and the second slope value. More particularly, Venable teaches a method to accurately determine the angle (slope) of a line passing through a boundary (*i.e.*, a document edge). Venable teaches using standard regression to fit the data stored in a bin (each bin is a set of edge points that are approximately collinear – a set of bounding pixels or set of edge traces for an object or document) to the line $y=mx+k$. Noting that the standard regression can have erratic results when the line approaches a vertical, Venable teaches using the standard linear regression for more horizontal lines and an inverted linear regression for more vertical lines. That is, Venable teaches identifying an object boundary, operating on the data defining the object boundary (this data is stored in one or more bins with each bin being a set of approximately collinear edge points defining the object boundary) using a standard linear regression and an inverted linear regression to fit the data with a bin to line. Paragraph 76 provides two equations from which a slope angle is determined. Thus, Venable does not teach determining a detected edge of a document from the first slope value and the second slope value – rather Venable teaches the determination of a single slope angle from a set of boundary/edge pixels.

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No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

Respectfully submitted,
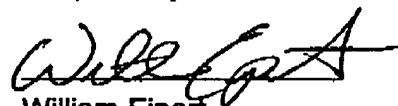
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